

**Reference Case Projections by End-Use Sector and Region**

**Table D17. Delivered Energy Consumption in Africa by End-Use Sector and Fuel, 2003-2030**  
(Quadrillion Btu)

Sector/Fuel	2003	Projections					Average Annual Percent Change, 2003-2030
		2010	2015	2020	2025	2030	
<b>Residential</b>							
Oil .....	0.6	1.2	1.2	1.1	1.1	1.1	2.3
Natural Gas .....	0.1	0.3	0.4	0.4	0.4	0.4	4.1
Coal .....	0.1	0.2	0.2	0.2	0.3	0.3	3.4
Electricity .....	0.4	0.7	0.9	1.0	1.2	1.3	4.2
Heat .....	0.0	0.0	0.0	0.0	0.0	0.0	—
Renewables .....	0.0	0.0	0.0	0.0	0.0	0.0	—
<b>Total .....</b>	<b>1.3</b>	<b>2.5</b>	<b>2.7</b>	<b>2.8</b>	<b>3.0</b>	<b>3.1</b>	<b>3.3</b>
<b>Commercial</b>							
Oil .....	0.1	0.1	0.1	0.1	0.1	0.1	2.7
Natural Gas .....	0.0	0.0	0.0	0.0	0.0	0.0	4.3
Coal .....	0.1	0.1	0.1	0.1	0.1	0.1	2.3
Electricity .....	0.2	0.3	0.3	0.4	0.5	0.5	4.5
Heat .....	0.0	0.0	0.0	0.0	0.0	0.0	—
Renewables .....	0.0	0.0	0.0	0.0	0.0	0.0	—
<b>Total .....</b>	<b>0.3</b>	<b>0.5</b>	<b>0.5</b>	<b>0.6</b>	<b>0.7</b>	<b>0.7</b>	<b>3.8</b>
<b>Industrial</b>							
Oil .....	1.5	2.0	2.3	2.4	2.4	2.6	1.9
Natural Gas .....	1.3	2.1	3.1	3.7	4.3	5.0	5.2
Coal .....	1.6	2.1	2.3	2.5	2.7	2.9	2.2
Electricity .....	0.9	0.9	1.0	1.1	1.2	1.4	1.7
Heat .....	0.0	0.0	0.0	0.0	0.0	0.0	—
Renewables .....	0.0	0.0	0.0	0.0	0.0	0.0	2.9
<b>Total .....</b>	<b>5.3</b>	<b>7.1</b>	<b>8.8</b>	<b>9.7</b>	<b>10.6</b>	<b>11.9</b>	<b>3.0</b>
<b>Transportation</b>							
Oil .....	2.9	3.6	3.9	4.2	4.6	5.1	2.2
Natural Gas .....	0.0	0.0	0.0	0.0	0.0	0.0	-5.3
Coal .....	0.0	0.0	0.0	0.0	0.0	0.0	-4.0
Electricity .....	0.0	0.0	0.0	0.0	0.0	0.0	0.7
Renewables .....	0.0	0.0	0.0	0.0	0.0	0.0	—
<b>Total .....</b>	<b>2.9</b>	<b>3.6</b>	<b>3.9</b>	<b>4.2</b>	<b>4.7</b>	<b>5.2</b>	<b>2.2</b>
<b>All End-Use Sectors</b>							
Oil .....	5.0	6.8	7.4	7.8	8.2	8.9	2.1
Natural Gas .....	1.4	2.4	3.5	4.1	4.7	5.5	5.1
Coal .....	1.8	2.5	2.7	2.9	3.1	3.3	2.2
Electricity .....	1.5	1.9	2.3	2.6	2.9	3.2	2.9
Heat .....	0.0	0.0	0.0	0.0	0.0	0.0	—
Renewables .....	0.0	0.0	0.0	0.0	0.0	0.0	7.1
<b>Delivered Energy .....</b>	<b>9.7</b>	<b>13.6</b>	<b>15.9</b>	<b>17.3</b>	<b>18.9</b>	<b>20.9</b>	<b>2.9</b>
Electricity-Related Losses .....	3.6	4.1	4.6	5.0	5.4	5.9	1.9
<b>Total .....</b>	<b>13.3</b>	<b>17.7</b>	<b>20.5</b>	<b>22.3</b>	<b>24.3</b>	<b>26.8</b>	<b>2.6</b>
<b>Electric Power<sup>a</sup></b>							
Oil .....	0.5	0.7	0.9	1.0	1.0	1.2	3.3
Natural Gas .....	1.3	1.1	1.4	2.0	2.6	3.2	3.3
Coal .....	2.3	2.9	3.2	3.2	3.2	3.1	1.2
Nuclear .....	0.1	0.1	0.2	0.2	0.2	0.2	0.7
Renewables .....	0.9	1.2	1.2	1.2	1.3	1.5	1.9
<b>Total .....</b>	<b>5.1</b>	<b>6.0</b>	<b>6.9</b>	<b>7.6</b>	<b>8.3</b>	<b>9.1</b>	<b>2.2</b>
<b>Total Energy Consumption</b>							
Oil .....	5.5	7.6	8.3	8.8	9.3	10.1	2.3
Natural Gas .....	2.7	3.5	4.9	6.1	7.4	8.7	4.4
Coal .....	4.1	5.3	5.9	6.1	6.2	6.4	1.7
Nuclear .....	0.1	0.1	0.2	0.2	0.2	0.2	0.7
Renewables .....	0.9	1.2	1.3	1.3	1.3	1.5	1.9
<b>Total .....</b>	<b>13.3</b>	<b>17.7</b>	<b>20.5</b>	<b>22.3</b>	<b>24.3</b>	<b>26.8</b>	<b>2.6</b>

<sup>a</sup>Fuel inputs used in the production of electricity and heat at central-station generators.

Sources: **2003:** Derived from Energy Information Administration (EIA), *International Energy Annual 2003* (May-July 2005), web site [www.eia.doe.gov/iea/](http://www.eia.doe.gov/iea/). **Projections:** EIA, System for the Analysis of Global Energy Markets (2006).